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THIS IS UNEVALUATED INFORMATION

SOURCE

Stanki i Instrument, No 3, 1952.

SOVIET MODEL 5107 GEAR SHAPER

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Model 5107 gear shaper is intended for cutting small-module internal and external spur and helical gears with a module of up to one millimeter, diameter up to 75 millimeters, and width of tooth up to 20 millimeters.

To cut spiral teeth, a screw guide is mounted on the slide.

The machining process is automatic within the limit of one work cycle, which consists of the radial feed of the cutter into the blank and the cutting of teeth in one or two rotations of the blank.

The machine can be set up for automatic conditions, in which case it is equipped with a special mechanism for automatic loading of the blank.

The gears are cut by the generating method. The cutter reciprocates parallel to the axis of the blank and at the same time rotates around its own axis. To exclude the possibility of friction and decrease the wear of the cutting edges, the cutter withdraws 0.07 millimeter from the blank on the return stroke.

When the electric motor of the hydraulic system is started, the table carrying the blank moves automatically toward the cutter up to the table roller stop and to the feed cam. At the beginning of machine operation, the roller moves along a section of the curve of the radial feed, and the table carrying the blank moves slowly toward the axis of the cutter until the cutter cuts into the full depth of the tooth. At this moment the table roller shifts to the radial section and generation of the blank begins (circular feed).

After the gear is cut, the machine stops automatically and the table returns to its original position.

- 1 -

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There is a rev	versing mechanicm for changing t	the direction of cutter and	
Enlits from 400 to	ting speed of the cutter is set 2,000 double strokes per minute range of from 0.01 to 0.56 milli	e. The feed is changed by	
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- 2 -

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